

5. (Previously Cancelled)

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15. (Cancelled)

16. (Cancelled)

1        17. (New) A method of treatment of a rolling element bearing component by hard  
2        particle abrasion including the steps of:  
3                immersing the component in a receptacle containing hard abrasive particles; and  
4                agitating the bearing component, hard particles or both to produce relative movement  
5                therebetween and to improve the surface topography of the component until a residual

6 compressive stress of between 200MPa and 500MPa is induced in the surface of the  
7 component.

1 18. (New) A method according to claim 17 wherein the agitation is performed for  
2 between 10 minutes and 1 hour.

1 19. (New) A method according to claim 18 wherein the agitation is performed for 30  
2 minutes.

1 20. (New) A method according to claim 17 wherein the relative movement is  
2 produced by rotating the component in one direction while the receptacle is rotated in the  
3 opposite direction.

1 21. (New) A method according to claim 17 wherein the receptacle rotates at between  
2 30 rpm and 90 rpm and the speed of rotation of the component is between 5 rpm and 15 rpm.

1 22. (New) A method according to claim 17 whereby the surface finish of the  
2 component is improved from 0.13 m to 0.07 m.

1 23. (New) A method according to claim 17 wherein the receptacle also contains a  
2 fluid.

1 24. (New) A method according to claim 23 wherein the fluid is aqueous.

1 25. (New) A method according to claim 24 wherein the fluid has a corrosion  
2 inhibitor.

1        26. (New) A rolling element bearing component in which the component surface  
2 exhibits a residual compressive stress of between 200MPa and 500MPa induced by a method  
3 according to claim 17.

1        27. (New) A rolling element bearing component according to claim 26, wherein the  
2 surface finish of the component is improved from around 0.13 m to around 0.07 m.

1        28. (New) A rolling element bearing comprising one or more components according  
2 to claims 26 or 27.

1        29. (New) Use of non-corrosive hard particle abrasion to treat a rolling element  
2 bearing component, the hard particle abrasion including the steps of:

3              immersing the bearing component in a receptacle containing hard abrasive particles;  
4 and

5              agitating the bearing component, hard abrasive particles or both to produce relative  
6 movement there between to improve the surface topography of the component and to increase  
7 the compressive stress in the surface of the component by between 200MPa and 500MPa.

1        30. (New) A rolling element bearing component according to claim 17 wherein a  
2 surface finish component is produced which requires no further machining.